REMARKS

This amendment is responsive to the office action dated March 23, 2007. Claims 1, 8, 13, 22 have been amended and claims 9, 11, 12, 23, 25-29, 31 and 33 canceled. Claims 1-8, 10, 13-22, 24, 30, 32 remain pending in this application.

I. Information Disclosure Statement

The examiner has requested a Supplement IDS to officially list prior art listed in the application which does not appear on the examiner's PTO-892 form or applicant's PTO-A820 (PTO-1449) form. Submitted concurrently herewith in a separate paper, applicant submits a Supplement IDS to comply with the examiner's request.

II. Drawings

The drawings stand objected to because they do not show "areas 50" referred to in the specification on page 25, paragraph 91. Fig. 12 has been amended to include reference numeral 50 for the areas 50 referred to in the specification. No new matter has been included in the application. It is submitted that the drawings are now in proper form.

III. Specification

The office action raised the following minor objections.

A. Missing "Brief Description of the Drawings"

In the original application, applicant included a description of the drawing figures at paragraphs 28 through paragraph 42. However, applicant styled this section at paragraph 27 "DETAILED DESCRIPTION OF THE DRAWINGS". Accordingly, applicant has changed this section heading to "BRIEF DESCRIPTION OF THE DRAWINGS" thereby providing a necessary section in the specification entitled "BRIEF DESCRIPTION OF THE DRAWINGS".

B. Page 15, paragraph 58

Applicant has amended the specification to revise it as requested by the examiner. Applicant submits that paragraph 58 is now clear and definite.

C. Page 21, paragraph 81

The specification is objected to because "areas 50" did not appear in the drawing figures. As above, Fig. 12 has been amended to include the required reference 50. Therefore, applicant submits that the specification is clear and definite.

D. Use of the term NAV

The examiner asserts the term NAV is not defined in the specification. However, the term "NAV" is used on page 1, paragraph 6 of the specification and is defined as "aggregate net-asset value". The term "NAV" also appears in paragraph 98. Thus, there is antecedent basis for use of this acronym. "NAV" is an extremely well known term in the mutual fund field, which is well understood to mean the market value of a fund share, which is synonymous with bid price. See Dictionary of Finance and Investment Terms, John Downers and Jordan Goodman, Barron's Educational Series, Inc., 1985, page 251. A copy of this reference is submitted in the concurrently filed Supplemental Information Disclosure Statement.

In view of the foregoing amendment and arguments, the objections to the specification should be withdrawn. No new matter has been added.

IV. Rejection of Claims Under Section 112

The claimed invention is objected to because undue experimental is required for use of the invention in consideration of a) breadth of the claims; b) nature of the invention; c) state of the prior art; d) level of one of ordinary skill; e) level of predictability in the art; f) amount of direction provided by the inventor; and g) the quantity of experimentation needed to use the invention. As will be discussed in detail below, applicant completely disagrees with the examiner of the assertion that the claimed invention is unpatentable because of undue experimentation. In general, applicant's invention is clear and definite and sets forth a concrete and specific method to carry out the invention as set forth in the claims, as amended, in a direct manner

A. Breadth of claims

First, and most importantly, the claims have been amended to be more detailed to better outline the present invention. While the initial claims were submitted in a form as broad as possible for most effective claim coverage, they are now more detailed to set forth with clarity applicant's inventions. In view of the narrowing of the claims to include such details and specifics of applicant's method, the examiner cannot meet the breadth of claims factor.

More specifically, the language found on applicant's Form ADV, Schedule F is not an admission that the work of Harry Markowitz is the basis for this invention but merely an admission that for the business of managing an investment portfolio, processes to select for an asset allocation strategy, such those built on the work of Harry Markowitz, are a necessary and usual precursor step to processes to select for investments with which to populate this strategy, as in the case of this invention.

On page 1, paragraph [03] of the instant application, the claimed invention is limited as applying it to the business of investment management by the statement that it "relates to

methods for making investment selections." The business of investment management is a regulated activity at both the Federal and State levels. The Form ADV is a submission to the public record required by State and SEC regulators of registered investment advisors. Its purpose is to provide a record of the description of services offered to prospective clients by those engaged in the business of investment management as a compensated activity – registered investment advisers. The Form ADV, dated 06-16-07, is a description of applicant's business as a registered investment adviser – Water Street Advisers, Inc.

The business of investment management is the business of creating and managing investment portfolios. That business involves several distinct processes, namely, the selection of investment selection only being one of these processes. The examiner's citation from applicant's Form ADV refers to another investment process is part of my business and that generally precedes that of investment selection, which is the selection of an asset allocation strategy. In applicant's business, as well as in general industry practice, these two processes are serial where one must select for an asset allocation strategy before one selects for investments with which to populate that strategy.

This business structure would be common knowledge to "persons skilled in the art" if it is a business structure found in the literature teaching investment management technique. See Investment Analysis and Portfolio Management, Jerome Cohen, Edward Zinbarg and Arthur Zeikel, Richard D. Irwin, Inc, Homewood, IL, 1982, p. viii (copy enclosed). In the Preface of Investment Analysis and Portfolio Management the authors indicate that their book is an introductory course in the investment process "intended for the first course in investments", and relate that they have structured its presentation to mirror how the investment process is currently taught, i.e. as a series of sequential processes, "to be the way most professors now

prefer to give the course: first ... Part II cover[ing] modern portfolio theory and ... Part IV deal[ing] with ...the basic security selection decision."

As another example, the authors of Fundamentals of Investments, Gordon Alexander and William Sharpe, Prentice Hall, Inc. Engelwood Cliffs, NJ, 1989, p. 9. (copy enclosed), a textbook on investment management addressed to a somewhat more advanced audience is "written to appeal to both advanced undergraduate and MBAs" (p.xxiv) and explain the sequential nature of the two processes more economically in their section entitled *The Investment Process*:

> "Th[e] first step of the investment process concludes with identification of the potential categories of financial assets for consideration in the ultimate portfolio.
>
> The second step of the investment process, performing securities analysis, involves examining a number of individual securities within the broad categories of financial assets previously identified."

Harry Markowitz' Nobel Prize winning work, as referenced in the examiner's office, was a treatise commonly known as *Modern Portfolio Theory (MPT).* Markowitz begins that thesis with a statement to the distinction between the processes of investment asset allocation selection, indicating that his thesis concerns the second of these selection processes where he inverts the order by which these two processes relate in current practice and placing investment selection before asset allocation selection. See *Portfolio selection*, Harry Markowitz, The Journal of Finance, Vol. VII, No.1, March 1952, p. 77. Markowitz stated:

> "THE PROCESS of SELECTING a portfolio may be divided into two stages. The first stage starts with observation and experience and ends with beliefs about the future performances of available securities. The second stage starts with the relevant beliefs about future performances and ends with the choice of portfolio. This paper is concerned with the second stage."

Thus, Harry Markowitz' MPT outlines a process for identifying a set of optimal strategies for allocating portfolio assets among a small number of categories of financial assets which a way of selecting the most efficient asset allocation strategy. This is also described in the following passage from Investment Analysis and Portfolio Management:

> "Let us explore the process by which modern portfolio theory can be applied to selecting strategies for achieving the desired [investment] objectives ... Once objectives are clarified, investors must determine how to most efficiently to distribute portfolio assets ... Through the use of portfolio optimization mathematics ... the portfolio manager can determine what actions would be necessary to shift to a point on the efficient frontier ... The concept of efficient frontiers can be applied to the problem of deciding how investors should divide their assets among the major categories. Creating the appropriate composition of portfolio assets ... that accurately reflects objectives is perhaps the most important aspect of effective investment management."

As a precursor step, the methodology employed in selecting an asset allocation strategy, which is the way asset classes are determined, impacts the subsequent method of selecting for specific investment assets. It impacts the method outlined by applicant in the instant application in that it allows the applicant to assume that the fund managers being evaluated all are operating in uniquely similar markets. Without knowing this, the investment selection process of applicant would not work.

The allocation strategy selection process in Markowitz' *Modern Portfolio Theory* is a necessary precursor process that provides the framework for the present invention of an investment selection process. For that reason, it is a necessary citation in both applicant's business description, ADV Form and the instant application, such as at paragraphs [08] and [09], beginning page 2 of the section "Background of the Invention". However, these are two distinctly separate and concrete processes as practiced in the business and to read into his Application that they are otherwise be illogical in the context of the current business structure and practice.

In view of the foregoing, the claims have been amended to be very precise to clearly articulate the claimed invention with particularity. Therefore, applicant's claims are not broad enough to meet the first factor of the undue experimentation test.

B. Nature of the Invention

The office action states that the nature of the invention supports the undue experimentation rejections. The citation from Roenfeldt and Cooley is merely opinion, not fact and the examiner is cautioned not to rely on it to support a factual finding of undue experimentation to reject the claims under Section 112. There are numerous statements in the Roenfeldt and Cooley citation outlining specific recommendations for implementing a process of investment analysis based on both return and risk factors. Applicant submits that this caveat is that it is a conciliatory statement to make their point of view more saleable to those readers skeptical of the recommended approach. This conciliatory statement has no connection whatsoever to or any bearing on whether the invention applicant's claims require undue experimentation.

Additionally, within the context of this article, this method is being applied to a much broader issue then indicated in the instant application. There exists a myriad of additional factors to be considered in regard to a company's capital budgeting decision beyond that of an individual investment's expected return and the variance of that expected return. Roenfeldt and Cooley list a few others on page 16 of their article that are specifically germane to the individual investment itself, such as on p.16: "R/V ratios used in conjunction with techniques such as pay-back period, net present value and internal rate of return, however, would explicitly add the risk dimension to the analysis and should enhance the decision-making process."

Other managerial issues outside of the parochial issue of the investment would be, such as, the impact of the investment on company operating efficiency, its effect on the company's

image and market position, any administrative or legal contingencies raised by its acquisition and use, its synergy with existing operations. These are all contingencies that any business manager would consider in making a capital budgeting decision, and that would necessitate that the R/V analysis outlined by Roenfeldt and Cooley be only "an aid to managerial judgment".

However, as set forth in the claims, as amended, applicant's invention is of much more limited and focused scope than that of a company's capital budget. Its use is for selecting investments for inclusion into an investment portfolio made exclusively of financial assets with the single purpose of generating investment income from those assets.

Also, the examiner asserts that applicant's admission on page 25 of the specification of a "trial and error" method used to determine the scale which is integral to his invention" supports the factor of nature of the invention to reject the claims. However, the examiner has misunderstood the statement in the instant specification. It is not applicant's actual method that employs trial and error but the process for conceiving the of the invention through trial and error to arrive at applicant's specific method. Thus, applicant admit to using trial and error during the inventing process, just like any other inventor. However, it should be understood that this is <u>not</u> procedure for implementing and practicing the present invention once the present invention was discovered. It is akin to Edison admitting that he tried over 400 different substances by "trial and error" as the filament to his light bulb before deciding on carbonized cotton thread.

In view of the foregoing, the office action clearly fails to meet the second factor for showing undue experimentation.

C. State of the Prior Art

The office action makes a conclusory statement that this factor is met merely because the methodology of utilizing risk-return plots to make investment decisions is widely used. This

statement provides no support at all for a finding that the state of the art necessitates experimentation. In fact, the state of the art requires that specific steps be taken in an investment selection process. In view of the foregoing, this factor is not met.

D. Level of One of Ordinary Skill

The examiner has inaccurately identified the person of ordinary skill in the art as to this invention. Those persons assumed skilled in the art as to the present invention do not include "the typical broker" as identified in the office action. Those skilled in the art of this invention are limited to investment advisers, whose registration criteria, such as Part I of the ADV Form, provide for supervisory hurdles to be enforced regarding prior levels of education and experience. This is not something not included in the application to become a broker/dealer. Thus, undue experimentation cannot be suggested by this factor.

E. Level of Predictability in the Art

The statement that "the level of predictability in the art factor is satisfied because the stock market continues to undergo dramatic change as the world changes" is overbroad and is a generalization. To clarify, as a rule, conditions in the financial markets do change, as do all business conditions in general. Unlike innovations involving physical objects, it must be assumed that the primary purpose of this invention and most others having to do with business processes is to tame this volatility or at least operate with a resilience to these changing conditions. But, it should be understood that while the subject matter of applicant's invention is unpredictable, the method of applicant's invention itself is clear and definite with precise steps.

Moreover, the sectioning process of the present invention, namely, the imposition of standardized measurements to verify the existence of anomalies in the distribution of points of investment performance for a population of book-valued collective funds, is in response specifically to the condition that market conditions will change. For most business and

economic processes that requires process that can be replicated faithfully over time, in that regard, a system of standard measurements is absolutely essential for both the implementation of the process, as well as the evaluation of the results.

Applicant's assertion in page 29, paragraph 102 of the application is that a solution has been found for this contingency and that the applicant's experience has been that the process of the present invention for selecting investments has been a useful solution to limiting the unpredictability inherent in selecting investments in the face of dramatic changes in financial market conditions.

As to other potential sources of "dramatic change", it appears unlikely that populations of book-valued investments, such as mutual funds, will disappear at a point in the near future as an investment type. It does not appear that investors will discontinue their practice of holding their investments as a portfolio, or in analyzing their gains in terms of the tradeoff between risk and returns. With these factors assumed to be constant, it would seem that the predictability in the art of this process should not be in question.

F. Amount of Direction Provided by the Inventor

As to the comment that "the level of amount of direction provided by the inventor factor" is satisfied because the inventor on page 29 through 30 of the specification provides other techniques to achieve the desired results such as "multivariate density estimation, cluster analysis, nearest-neighbor analysis and point-pattern analysis". This, again, is a conclusory statement that is devoid of any factual or reasoned connection between the citation and the level of amount of direction provided by the inventor.

Further, the office action states that since the invention can be combined with other techniques indicates that the methodology of the present invention is not proven or perfected. The office action is completely devoid of any logic or reasoning in support of this conclusory

statement. Virtually every patented invention can be combined or used in connection with some other invention. This does not make it unproven or unperfected. The fact that applicant's invention can be used with other techniques merely means is that the invention is *compatible* with other techniques. Thus, the inventor does not fail to give the user direction. In fact, as outlined in the claims, the specification method for carrying out the invention is set forth in detail.

G. The Quantity of Experimentation Needed to Use the Invention

The examiner simply reiterates the steps of the present invention, namely, the steps of segmentation and distribution, as a somehow showing the present invention requires a large quantity of experimentation to be carried out. In support of this, the office action states that having dependent claims that provide optional steps tends to show experimentation. Merely having *additional* optional steps does not make the invention vague or unclear and, moreover, does not in any way suggest experimentation. Thus, the mere presence of dependent claims the set forth alternative steps does not show a large quantity of experimentation. Thus, applicant submits that this factor cannot be met. To make the invention more clear, additional details have been provided in the claims.

H. Conclusion as to Rejection of Claims Under Section 112.

In view of the foregoing, applicant submits that the claimed invention is clear and definite which sets forth a concrete, unambiguous and understandable method for selecting investments in book-valued collective investment funds. The steps in the claims, as amended, set forth clear and distinct steps that are completely devoid of speculation and/or experimentation when carrying out the method. Therefore, applicant submits that the rejection of the claims under Section 112 under the undue experimentation rule is misplaced and not

applicable in the instant application. As a result, applicant's claims are clear and definite under Section 112.

V. Rejection of Claims Under Section 103

A. Claims 1 and 2 (Lear in view of Schrage)

The office action states that Lear teaches determining past investment performance of funds in a population. However, the office action states that Lear does not teach selecting based on variances in the population distribution from that of a normal distribution around population mid-point. However, Schrage teaches selecting a group for investment based on variances.

The office action argues that these references are combinable under Section 103 because they are "analogous" or "pertinent" because they are both in the same field of endeavor as the application because Lear and Schrage are in the field of portfolio selection. As a result, it is asserted that it would have been obvious to a person of ordinary skill to modify Lear to include a variance analysis of Schrage because variance is the square of standard deviation and still allows the consideration of risk since there is a need to incorporate risk in the evaluation of an investment decision.

First, Schrage's disclosures are not related to the process of investment selection. Schrage teaches alternative methods of selecting an asset allocation strategy for an investment portfolio, comparing Markowitz' approach to optimizing investment performance efficiency through the analysis of the historical covariance of investment returns between asset classes of investments, to other analytical techniques, e.g. value-at-risk and other efficiency strategies, such as project budgeting, portfolio pooling, cash-flow matching and lease structuring.

To the extent that his paper touches on the business of investment management, the author is talking about options for selecting an asset allocation strategy, which is a different

business process than selecting investments. Although Schrage's commentary is "in the field of portfolio selection", it is not pertinent or analogous to the claims of the present invention because the instant method is not "in the field of portfolio selection". In contrast, the present invention relates to the process of investment selection.

Second, the office action confuses different applications of a very broadly used and elementary statistical concept, namely, variance, which is the process of documenting inconsistencies in the expected or average value for a single data series. For business and scientific applications, "variance" exists as a statistical tool for calculating a standard measurement of the concept of inconsistency, which is denominated in terms of either variance or standard deviation, as identified in the office action.

Lear uses this tool, denominated in terms of standard deviation, in creating his measurement of a confidence factor although if he had denominated his confidence factor in terms of variance, it would have created essentially the same measure.

There also exists another statistical tool, namely, covariance, that Schrage uses to critique Markowitz. This is a standardized measurement of the degree of correlation between two data series. Its use is to describe inconsistencies in the match of two series of data over time and is a different tool with a different purpose from that of single-series variance or standard deviation. Covariance is also a statistical tool in common use for scientific and business analyses, which the office action does not identify, but which is attached hereto have included as an excerpt from the Dictionary of Finance and Investment Terms, attached.

The use of the concept "variance" in describing both of these processes relates to documenting inconsistencies found in a series of periodic investment returns around an expected or average value, for Lear, a series of investment returns around a single investment's

average of those returns, and for Schrage, two series of investment returns around a common path of these investment returns over time.

In contrast, in the present application, applicant uses these same statistical tools in creating standard measurements, but in describing the instant process, the concept of variance in a different context and meaning is used. The term variance in this context is used to describe applicant's finding of anomalies within the expected distribution of a population of investments around its population center. This is different than finding anomalies within the pattern of periodic returns around the average of those returns (Lear) or anomalies in the match of the pattern of periodic returns for two investments over time (Schrage). Therefore, neither the teaching of Lear and Schrage, alone or in combination meet the claims, as amended.

As outlined in the present application, this process of finding anomalies in an expected distribution of points of investment performance for an asset-class population of book-valued investments is unique and novel because these anomalies are not thought to exist in fact.

As outlined in the "Background of the Invention" section of the specification, beginning on paragraph 10, page 3 and continuing through paragraphs 13-16, those skilled in the art have been taught that the wide dispersal of points of investment performance for a asset-class population of book-valued investments, as documented from the empirical evidence referenced in several academic studies, can only be the result of measurement or sample error and that such a distribution, to the extent that it exists at all, can only take the form of a symmetrical and random distribution around the points of average performance for the asset class. The novel insight that the existence of these anomalies is legitimate and that they carry informational value regarding future differences in investment performance is why the present process based on this insight is unique.

There is a reason for this lack of foresight. William Sharpe's thesis on the operation of financial markets, called "The Capital Assets Pricing Model (CAPM)", attached hereto, is the industry standard for interpreting the operation of populations of investments. It relies on drawing an "equilibrium line" across the breadth of risk within a risk-return plot of an asset-class population to define that population in terms of a common return/risk (R/V) ratio. This equilibrium-line device requires that any deviations in points of performance for the asset-class population of investments from the equilibrium line be only the product of "random error" and that they form a pattern of dispersal that is symmetrical and random. If that pattern of dispersal was something different than symmetrical and random, by the laws of statistics, the equilibrium line would cease to exist.

The record of economic studies since Sharpe's publication of that model, such as the 1999 study by John Cochrane, submitted in the concurrently filed Supplemental Information Disclosure Statement, was included with the application as the most-recent non-patent source illustrative of these studies. It has consistently reinforced this belief of interpreting their findings of performance points of populations of book-valued collective funds that exist in a distribution around the population average performance to be errors in either data collected or the operation of the collective funds. The record of prior patent art presented in the Background section of my Application, paragraphs 10, 13-16, is presented as support of the position that no one has thought to challenge Sharpe's assertion of random error.

To summarize, the present invention is for a process built on the challenge of this industry view. Populations of book-valued investments operate differently than populations of investments that are traded in a secondary market. For an asset class of these book-valued investments, their points of performance can reside off of an equilibrium line and they can exist in relation to that line in a distribution that is other than random and symmetrical. And for

asset-class populations of book-valued investments comprised of collective investment funds, this anomaly found in the presumed random and asymmetrical distribution of points of past performance carries information regarding the distribution of points of future performance for the population. Therefore, the cited combination fails to meet the limitations of claim 1, as amended.

Specifically, as to claim 2, the office action states that Lear teaches selecting a group for investment based on relative risk of past investment performance. He does not, however, teach selecting for that group based on risk in the population distribution from that of a normal distribution of said past investment performance. Schrage is cited for the teaching of selecting the group for investment based on variances.

In Lear, Col, 6, line 9, the phrase "the concepts propounded above" refers to a discussion immediately preceding this line (beginning column 5, line 61) about applying his process of calculating the MER (minimum expected returns at a confidence level) to make a decision to select between two investments based on tolerance for risk. MER is a process for applying a common statistical tool, which is calculating a confidence interval around a measurement of an average value for a sample, to the measures of the average of a series of periodic returns and the variance of those periodic returns around this average for a single investment.

In applying his measure to more than a single investment, Lear suggests comparing measures of MER for a population of investments and selecting for one or more of the population whose MER matches the investor's tolerance for risk. He does not suggest calculating an average value for this population or statistics concerning the distribution characteristics of this population around an average value. Further he does not teach comparing a population's distribution characteristics with that of a normal or symmetrical

distribution. Therefore, Lear and Schrage in combination fails to meet the limitations of claim 2. Moreover, since claim 2 is dependent on now allowable claim 1, applicant submits that claim 2 is now also allowable.

Therefore, applicant submits that the combination of Lear in view of Schrage, even assuming that they are combinable under Section 103 fail to teach applicant's invention and render it unpatentable.

B. Claims 3, 11 and 12 (Lear, Schrage and Charnley)

The office action states that Lear teaches determining past investment performance of the funds in the population but does not teach the use of variances. Schrage is cited for this teaching. The Charnley admissions are cited for the teachings of risk-return graphs.

As to claim 3, the office action states that Lear teaches determining from past performance, however not selecting a group based on variances in population distribution. On the other hand, Schrage teaches selecting for investment base on variances. However, neither teaches sectioning said population distribution into equal-sized portions. On the other hand, Charnley teaches the said sectioning was attributable to prior art, as in Fig 8-11 and specification on page 18, paragraph 71. The office action also states that Lear and Schrage are pertinent and analogous because are in the field of portfolio selection and that a person skilled in the art to section the risk-return graphs are obvious in view of Charnley, because Charnley adopted the sectioning technique from others.

To clarify, Figs 8-11 are examples of prior art using sectioning techniques to segregate groups of investments based on differences in characteristics of past investment performance. The sectioning technique illustrated in Fig. 8 segments investments in terms of differences in past risk-adjusted returns; Fig. 9 in terms of past levels of returns variance; Fig. 10 in terms of

past levels of average return; and Fig. 11 in terms of both past levels of returns variance and average return.

As discussed in the section, Background of the Invention, paragraphs 13-18 beginning on page 4 of the Application, these sectioning methods based on finding differences in characteristics of past investment performance have not resulted in successful processes suitable for selecting investments and that the method of the present invention, for selecting for investments in terms of *anomalies* found in the distribution of an asset-class population, is meant to correct for this deficiency.

Therefore, the cited prior art fails to teach the limitations found in claim 3. Also, claim 3 is dependent on now allowable claim. Therefore, claim 3 is also now allowable. The rejections as to claims 11 and 12 are moot in view of the cancelation thereof.

C. Claim 4 (Lear, Schrage, Charnley and Devore)

As to claim 4, the office action states that Lear teaches determining from past performance, however does not teach selecting a group based on variances in population distribution. On the other hand, Schrage teaches selecting for investment based on variances.

However, it is asserted that neither teaches sectioning population into equal-sized portions. On the other hand, Devore teaches step of sectioning population distribution into equal-sized portions is by drawing a dividing line at 0.675 STDEV from a center point of investment risk and then by drawing another dividing line also at 0.675 STDEV from center of average returns for the population. It is stated that Lear, Schrage and Charnley are in the field of statistics applied to portfolio selection and that it would be obvious to a person of ordinary skill to modify Lear and Schrage to include a division of the population under the bell curve into quarters in view of Devore, since Devore teaches a statistical technique since the need to analyze different sets of a population is a standard statistical method. It is also stated that it

would be obvious to a person of ordinary skill to use standard statistical techniques to adapt system of Lear because an analyst would need the standard tools used in statistics.

The examiner's reasoning is not understood and is convoluted. The core of applicant's invention is based on a unique process based on the insight that anomalies in the distribution of points of investment performance for an asset-class population of book-valued collective funds have informational value regarding differences in future investment performance.

In that connection, Applicant does not believe one skilled in the art would have thought to create a process to test for anomalies in the assumed population distribution for a population of book-valued collective funds. This process of sectioning applies to the process of selecting investments within a population of book-valued collective funds on the basis of anomalies to an assumed normal or otherwise symmetrical distribution around the average risk and return for that population. It would not be obvious to person of ordinary skill to divide the population distribution of a population of book-valued collective funds into quartiles because Sharpe, Cochrane and others teach that such a distribution is due only to random error and holds no constructive informational content related to selecting investments from that population.

It should also be noted that the present invention is not in the field of statistics applied to portfolio selection but rather to statistics applied to investment selection. As stated above, the cited Lear reference is in the field of statistics applied to investment selection but applies those statistics only to describe individual investments not to describe populations of investments. In light of Sharpe, Cahart, Cochrane it would not be obvious to a person skilled in the art to apply Lear's approach selecting based on the documentation of single-investment statistics to selecting based on the documentation of asset-class population statistics. Thus, the cited prior art fails to teach the invention set forth in claim 4.

The further citation of Devore does not assist in meeting the limitation of claim 4. By way of background, Devore teaches sectioning of a data sample for statistical analysis, but does not teach the step of sectioning a population distribution of investments into equal-sized portions is by drawing a dividing line at 0.675 STDEV from a center point of investment risk and then by drawing another dividing line also at 0.675 STDEV from center of average returns for the population.

Also, since claim 4 is dependent on now allowable claims 1-3, applicant submits that claim 4 should also be allowable.

D. Claims 5 and 6 (Lear, Schrage and Devore)

Claims 5 and 6 are rejected as obvious over Lear and Schrage and further in view of Devore.

As to claim 5, the office action states that Lear teaches determining from past performance, however does not teach selecting a group based on variances in population distribution. On the other hand, Schrage teaches selecting for investment based on variances. However, the office action states that neither teaches that past performance is calculated for a number of periods adequate for generating a valid measure of returns variance. On the other hand, Devore teaches choosing an adequate sample size for all statistical analyses to meet the limitation of the claims in combination with Lear and Schrage.

Claim 5 is dependent on now allowable claim 1 and applies to the process of selecting investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population. As above, it would not be obvious to person of ordinary skill to divide the population distribution of a population of book-valued collective funds into quartiles because Sharpe, Cochrane and others teach that such a distribution is due only to random error and

holds no constructive informational content related to selecting investments from that population.

The further citation of Devore does not assist in meeting the limitation of claim 5. By way of background, Devore teaches using an adequate sample size for statistical analysis, but does not teach using an adequate sample size for a process to select investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population.

The process of claim 5 is dependent upon and is an explanatory point to the method of now allowable claim 1, and is a necessary disclosure of the implementation of the invention so that others may use it. Therefore, claim 5 is also submitted as being allowable.

As to claim 6, the office action states that Lear teaches determining from past performance, however does not teach selecting a group based on variances in population distribution. On the other hand, Schrage teaches selecting for investment based on variances as asserted by the examiner. The office action states that neither teaches that past performance is determined for a period of at least five preceding years but, on the other hand, Devore teaches choosing an adequate sample size for all statistical analyses. Also, claim 5 is rejected for the same reasons as claim 4 above.

Again, claim 6 is dependent on independent claim 1 to further specify the length of period recommended as adequate for generating a valid measure of returns variance as an explanatory point of and further narrowing the method of claim 1. The limitations of claim 5 outline additional steps of the method of the present invention.

Claim 6 includes limitations that apply to the process of selecting investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population. It

would not be obvious to person of ordinary skill to divide the population distribution of a population of book-valued collective funds into quartiles because Sharpe, Cahart, Cochrane and others teach that such a distribution is due only to random error and holds no constructive informational content related to selecting investments from that population, as above.

The additional citation of Devore fails to enable the cited combination to teach the limitations of claim 6. Devore merely teaches using an adequate sample size for statistical analysis, but does not teach using an adequate sample size for a process to select investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population.

Since claim 6 is dependent on now allowable claim 1, applicant submits that claim 6 is now also allowable.

Therefore, the cited combination of Lear, Schrage and Devore fail to render claims 5 and 6 unpatentable under Section 103.

E. Claims 7-9, 13-16, 21-23, 26-29 (Lear, Schrage, Charnley and Roenfeldt and Cooley)

The office action states that claims 7, 8, 9, 13, 14, 15, 16, 21, 22, 23, 26, 27, 28 and 29 are rejected as applied to claim 3 (paragraphs 16-17) and in further view of Roenfeldt and Cooley who expound on ranking of investments, citing. Ranking Investments by Risk and Return , July 1977 Atlanta Economic Review.

Turning first to claim 7, it is asserted that Lear teaches determining from past performance, however does not teach selecting a group based on variances in population distribution. On the other hand, Schrage teaches selecting for investment based on variances.

However, neither teaches assigning each equal-sized population areas with a rank according to population size. On the other hand, Roenfeldt teaches method for ranking investments based on risk and return as done in Application. – Atlanta Economic Review, all pages. It is stated that it would be obvious to person skilled in art to modify Lear Schrage to include ranking in view of Roenfeldt because Roenfeldt indicates how ranking investments based on risk and return points to selecting proper investments and that it would have been obvious to use the improved ranking system to refine system of Lear because the ranking system gives insight as to which investments to purchase.

To clarify, Roenfeldt teaches using points of risk and return to rank investments based on in terms of their risk-adjusted returns, which is the ratio of each investment's expected return and risk, but does not teach using points of risk and return to section a asset-class distribution of points of investment performance into areas containing qual populations of investments under the presumption of a normal distribution of those points of performance around the average risk and return for the asset-class population.

Roenfeldt's ranking procedure is the same as illustrated in Fig. 8 as prior art and described in paragraph 35 on page 11 of the instant application. As cited in the specification, on page 4, paragraph 13 and 16, various economic studies have concluded that this procedure has been shown to be inadequate for predicting differences in future investment performance between investments.

The purpose of the instant invention is to solve for this inadequacy. Applicant's ranking of populations of book-valued collective funds in terms of <u>population density</u> does produce a predictive measure that is economically viable and operates independently of market conditions.

Claim 7 is dependent on claim 3 and applies to the process of selecting investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population. It would not be obvious to person of ordinary skill to divide the population distribution of a population of book-valued collective funds into quartiles because Sharpe, Cahart, Cochrane and others teach that such a distribution is due only to random error and holds no constructive informational content related to selecting investments from that population, as above.

It would not have been obvious to person skilled in art to modify Lear and Schrage to include ranking of sections of an asset-class population by population density because no one would have expected such a ranking to provide useful information about future differences in investment performance. The limitations of claim 7 further define the method of claim 1. Since claim 7 is dependent on claim 1, applicant submits that claim 7 is also allowable.

As to claim 8, the office action states that Lear teaches determining from past performance, however does not teach selecting a group based on variances in population distribution. On the other hand, Schrage teaches selecting for investment base on variances. However, Lear does not teach the step of selecting for investment from a composite area formed from at least two equal-sized population areas having a high rank. On the other hand, Charnley teaches that selecting equal size populations was in the prior art as shown in fig.7. Claim 8 is also rejected for motivational analysis as in rejection of claim 7 above.

Claim 8 has been further amended to better define the instant invention. Figure 7 depicts a basic structure for illustrating the invention in terms in general-acceptance within the investment management business. It shows a return and risk plot for an asset-class population bisected by an equilibrium line. This equilibrium line is drawn under the tenets of the CAPM to

represent all points having identical risk-adjusted returns (return/variance) across that population.

Although the equilibrium line, by definition, divides the population distribution into two equal-sized sections, its purpose is not to illustrate the process of "selection". The process of the present invention in claim 8 calls for selecting for the funds within two or more population segments having been ranked high in terms of population size by the process in claim 7 after being formed by the sectioning process in claim 3. Even if figure 7 was depicting a process of selecting the investments for one equal-sized section over another, that selection would be based on differences in risk-adjusted returns, not population density. As I explained in detail above, selecting investments from within an asset-class population on the basis of differences in risk-adjusted returns has been shown not to have been a successful selection process.

Therefore, applicant submits that claim 8 is patentably distinctive over the cited prior art. Also, since claim 8 is dependent on now allowable claim 7 (and 1, 3), applicant submits that claim 8 is also allowable.

As to claim 13, the office action states that Lear teaches (a) creating a population distribution representative of past investment performance in a two-dimensional spatial distribution with one dimension being investment returns and the other dimension begin the risk of those returns. However, Lear does not teach (b) identifying variances in the population density. However, Schrage teaches selecting a group for investment based on variances. Furthermore, Charnley teaches (c) measuring the population of book-valued funds in equal-sized areas because Charnley indicates in Fig. 7 that dividing up the population was prior art. Finally, Roenfeldt teaches (d) ranking the equal-sized areas and (e) selecting. The office action states that it would be obvious to person skilled in the art to modify Lear to include a variance analysis in view of Schrage because variance is just the square of the standard deviation and still

allows consideration of risk since the need to incorporate risk in any evaluation of investment decisions. (Roenfeldt) and it would be obvious to one skilled to use the improved Markowitz analysis to incorporate risk consideration in the system of Lear because Lear would need the feature of risk evaluation with either variance or standard deviation.

The combination of Lear, Schrage and Charnley is discussed detail above and incorporated herein in connection with claim 13. As to the further citation of Roenfeldt, applicant agrees that Roenfeldt does teach ranking and selecting individual investments by risk-adjusted returns (R/V), but <u>does not</u> teach either combining those investments into equal-sized areas, ranking these equal-sized areas or selecting these equal-sized areas on any basis, including the basis of population size of applicants invention. Therefore, the additional citation of Roenfeldt fails to assist the cited combination to meet the limitations of the claims.

As to the asserted of obviousness related to using "the improved Markowitz analysis to incorporate risk consideration in the system of Lear" is an illogical statement because Markowitz' analysis deals with the process of selecting an asset allocation strategy based on the covariance of periodic returns among asset-classes. It does not apply to the process of investment selection or to the process of investment selection based on differences in population density, as in the present invention.

As to Claim 14, the office action states that it is rejected under the same rationale as claim 2. Therefore, the arguments related to claim 2 above are incorporated herein.

Claim 14 is a dependent claim explaining the implementation of the process outlined in claim 13, which outlines a novel process for selecting investments from within an asset-class population of book-valued collective funds based on anomalies in the distribution of the points of past investment performance for that population.

Applicant's claim 14 explains how to implement this novel process, namely, the display of investment returns, denominated as the average of past periodic returns as a function of investment risk, which is the generally-accepted procedure for categorizing differences in performance among a population of investments. To further clarify, claim 14 identifies the method step to be taken to implement the selection process. It establishes a business practice by telling those wanting to copy the process how to document the distribution of points of investment performance for an asset-class population of book-valued collective funds.

Also, since claim 14 depends from now allowable claim 13, applicant submits that claim 14 is also now allowable.

As to claim 15, the office action states that Lear teaches population distribution is a display of investment returns, as a function of investment risk. However, Lear does not teach returns denominated as the covariance as proposed. On the other hand, Schrage teaches returns denominated as the covariance. This claim is also rejected for motivational analysis as in rejection of claim 13 above.

Schrage does teach a measurement process of returns denominated as covariance but teaches it as it applies to the process of selecting a portfolio allocation strategy not as it applies to the process of investment selection. As a process for selecting an allocation strategy, Schrage's calculation of covariance is a tool limited to the measurement of correlation between the patterns of periodic returns for two asset-classes of investments, which is a preceding, but distinctly separate process in the business activity of selecting an investment portfolio to my process of selecting investments by which to populate the selected strategy.

Also, the method of the present invention focuses on measuring the correlation between the patterns of returns between two individual investments within a single asset class. not between to asset-classes of investments. Thus, claim 15 set forth when the returns variance

of an asset-class population of investments is calculated in terms of covariance are germane only to the process of investment selection where it applies to the measurement of correlation between the patterns of periodic returns between a single investment and some asset-class benchmark.

The usage of the term "covariance" is meant to cite the case where the calculation of returns variance for investment within an asset class is denominated in terms of "beta", which is common a term for the variability of an individual investment's periodic returns, as outlined in William Sharpe's CAPM.

In the instant application, the term is used in paragraphs 11 and 12 on page 4 in the context of investment selection processes and as applying only to the process of investments within a single asset class. This is a dependent claim explaining the implementation of the process outlined in claim 13, which outlines a novel process for selecting investments from within an asset-class population of book-valued collective funds based on anomalies in the distribution of the points of past investment performance for that population.

Claim 15 explains how to implement this novel process under an alternative, but widely used, measure of investment risk, namely, beta. As an explanatory point, claim 15 identifies an action step to be taken to implement the selection process of the present invention. Since claim 15 is dependent on now allowable claim 13, applicant submits that claim 15 is now also allowable over the cited prior art.

As to claim 16, the office action states that Lear teaches population distribution is a display of investment returns as a function of investment risk. However, Lear does not teach sectioning population distribution into from 4 to 25 said equal-sized areas. On the other hand, Charnley teaches in Fig. 7 the division into equal areas as prior art. Also, the claims is rejected for motivational analysis as in rejection of claim 13 above.

As explained in the above response to claim 8, above, Fig. 7 does not teach the division of an asset-class population into areas of presumably equal population segments as prior art. It is an illustration of the common portrayal of an asset class and an equilibrium line denoting all points corresponding to the average investment performance for that population.

To the extent that is can be construed as illustrating the division of an asset-class population into equal-sized areas, it does so only in terms of differences in investment performance, not in terms of an expectation of areas of equal numbers of an asset-class population that forms a normal distribution around the center point for returns and returns variance for that population.

Again, this is a dependent claim explaining the implementation of the process outlined in claim 13, which outlines a novel process for selecting investments from within an asset-class population of book-valued collective funds based on anomalies in the distribution of the points of past investment performance for that population. Claim 16 explains the options available for sectioning a distribution of points of performance for an asset-class population of investments based on the presumption of a normal distribution of those points around the point of average risk and return for the population. This claim uniquely identifies an action to be taken to implement the selection process. It establishes a business practice – telling those wanting to practice the process that there is some flexibility to the sectioning procedure, as long as one conforms to creating sections of equal population under the assumption of a normal distribution of points of performance.

Since claim 16 is dependent on now allowable claim 13, applicant submits that claim 16 is now also allowable over the cited prior art.

As to claim 21, the office action states that Lear teaches population distribution is a display of investment returns as a function of investment risk. However, Lear does not teach

sectioning population distribution into 16 equal-sized areas. On the other hand, Charnley teaches in Fig. 11 the division into 16 equal areas as prior art. Claim 21 is also rejected for motivational analysis as in rejection of claim 13 above.

As above, claim 21 is patentable over the cited prior art for the same reasons why claim 3 is patentable. Fig. 11 sets forth the division of an asset-class population into 16 equal-sized areas, it does so only in terms of delineating differences in investment performance not in terms of an expectation of equal numbers of an asset-class population that forms a normal distribution around the center point for returns and returns variance for that population.

As discussed in detail above, Fig. 11 is illustrative of sectioning methods based on finding differences in characteristics of past investment performance have not resulted in successful processes suitable for selecting investments and that the method of the present invention, for selecting for investments in terms of *anomalies* found in the distribution of an asset-class population, is meant to correct for this deficiency.

Therefore, the cited prior art fails to teach the limitations found in claim 21. Claim 21 is a dependent claim explaining the implementation of the process outlined in claim 13, which outlines a novel process for selecting investments from within an asset-class population of book-valued collective funds based on anomalies in the distribution of the points of past investment performance for that population. Claim 21 further defines the method of sectioning a distribution of points of performance for an asset-class population of investments based on the presumption of a normal distribution of those points around the point of average risk and return for the population.

Claim 21 identifies an action to be taken to implement the selection process and it establishes a business practice telling those wanting to practice the process that the preferred method to implement the sectioning procedure.

Also, since claim 21 is dependent on now allowable claim 13, applicant submits that claim 21 is now also allowable over the cited prior art.

As to claim 22, the office action states that Lear teaches population distribution is a display of investment returns as a function of investment risk. However, Lear does not teach combining two or more most-populated areas so ranked to form a single composite selected area. On the other hand, Roenfeldt teaches combining areas and ranking. The claim is also rejected for motivational analysis as in rejection of claim 13 above.

Roenfeldt teaches ranking investment alternatives but <u>does not</u> teach the division of an asset-class population into equal-sized areas, or does he teach the division of an asset-class population into equal-sized areas in terms of an expectation of equal numbers of an asset-class population that forms a normal distribution around the center point for returns and returns variance for that population. Further Roenfeldt does not teach combining said equal-sized areas to form a single composite selected area.

Also, this is a dependent claim explaining and further limiting the process outlined in claim 13. Also, since claim 22 is dependent on now allowable claim 13, applicant submits that claim 22 is now also allowable over the cited prior art.

The rejection of claims 9, 23, 26-29 is moot in view of the cancelation thereof.

In summary, the cited combination of references fails to render the claimed invention unpatentable. The rejection under Section 103 should be withdrawn.

F. Claims 10, 17-20, 24, 25 and 30-33

Claims 10, 17-20, 24 25, and 30-33 are rejected as being unpatentable over previously mentioned art where the motivation analysis is essentially the same as above and eliminated for brevity.

As to claim 10, the office action states that Lear teaches population distribution is a display of investment returns as a function of investment risk. However, Lear does not teach combining two or more equal-sized population areas having a high rank relative to all other ranks assigned as proposed in the application. On the other hand, Alcaly, Co. (PN 2002/0007329 A1) teaches selecting the group from the population, namely, claim 1.

Alcaly teaches grouping a population of investments into asset classes, which is a process that precedes both the processes of selecting for an asset allocation strategy and selecting for investments within the practice of investment management. Alcaly does not teach selecting a group within an asset class or selecting a group based on combining two or more equal-sized population areas having a high rank relative to all other ranks assigned as proposed in the application. In claim 1 of Alcaly, points (b) and (c), the reference to "position" relates to alternative investment strategies of holding a short-position (borrowing the funds to invest) versus holding a long-position (investing using only those funds one owns). Most importantly, it does not relate to the distribution characteristics of a population.

Alcaly does not propose a selection process. In contrast, his preliminary application is for a process to calculate investment returns for classes of assets whose values are not already documented in terms of investment return, e.g. "bonds, currencies and commodities", as outlined in his Abstract. Alcaly's point (d) in claim 1 indicates that his process is limited to only those investment assets where there exists a "market price". In contrast, the process of the present invention is specifically limited to those assets where there does not exist a market price separate from the asset's book-value. Therefore, Alcaly is not pertinent to the teaching of claim 10. Since claim 10 is dependent indirectly on now allowable claim 1, applicant submits that claim 10 is now also allowable over the cited prior art.

As to claim 17, the office action states that it is rejected under the same rationale as claim 4 above. The arguments in connection with claim 4 above are applicable as well to claim 17 and are reasserted herein.

More specifically, claim 17 describes how to implement the process outlined in claim 13 and is a necessary explanatory point of the invention. The office action suggests that applicant's use of a simple and basic statistical tool, namely, segmenting a population distribution into what would be quartiles if that population formed a normal distribution, is a reason to reject as obvious the applicant's innovation of selecting investments by identifying anomalies in the expected distribution of past-period investment performance for a population of book-valued investments.

This is inconsistent with other application approvals that use simple, common statistical processes to implement their inventions, as precedents: Lear (use of a basic statistical tool to calculating a "confidence level" in his invention); cited USPN 6,003,018, issued to Michaud, et. al. (bases selection process on historical performance data, which is data that is calculated using basic statistical tools of the "average" and "standard deviation" of prior-period investment returns; cited USPN 5,884,287, issued to Edesess and 5,806,049, issued to Petuzzi (rely on the calculation of a probability function, which another common statistical tool in their inventions).

The critical obviousness question is whether one skilled in the art would have thought to create a process to test for anomalies in the assumed population distribution for a population of book-valued collective funds, which is discussed in detail in connection with claim 3 above. Claim 17 explains how to proceed in sectioning a distribution of points of performance for an asset-class population of investments to implement the presumption of a normal distribution of those points around the point of average risk and return for the population. As an explanatory point, claim 17 identifies an action to be taken to implement the selection process. It

establishes a business practice telling those wanting to practice applicant's process how to accomplish the process of sectioning to create areas holding of equal populations under the assumption of a normal distribution of points of performance.

Also, since claim 17 is indirectly dependent on now allowable claim 13, applicant submits that claim 17 is now also allowable over the cited prior art.

As to claim 18, the office action states that it is rejected under the same rationale as claim 5 above.

Claim 18 is allowable over the cited prior art for the same reason as claim 5. Claim 18 applies to the process of selecting investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population. It would not be obvious to person of ordinary skill to divide the population distribution of a population of book-valued collective funds into quartiles because Sharpe, Cahart, Cochrane and others teach that such a distribution is due only to random error and holds no constructive informational content related to selecting investments from that population.

Devore teaches using an adequate sample size for statistical analysis, but does not teach using an adequate sample size for a process to select investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population. The process of claim 18 is an explanatory point of the method of claim 13, and further defines the present invention.

Claim 18 discloses a criteria that the length of time considered for documenting a distribution of points of past-period performance for an asset-class population of investments be sufficient to provide a statistically legitimate measurement. As an explanatory point, this

claim identifies an action to be taken to implement the selection process. It establishes a business practice telling those wanting to practice the process how to accomplish the process of documenting differences in the density of populations of book-valued collective funds under the assumption of a normal distribution of points of performance within an asset-class of those funds. Since claim 18 is dependent on now allowable claim 13, applicant submits that claim 18 is now also allowable over the cited prior art.

As to claim 19, the office action states that it is rejected under the same rationale as claim 6 above.

Claim 19, as claim 6, also allowable in view of the arguments submitted regarding claim 6. This is a dependent claim to claim 18 specifying the length of period recommended as adequate for generating a valid measure of returns variance as a further explanatory point of the method of claim 13, and further defines the method of the invention.

Claim 19 applies to the process of selecting investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population. It would not be obvious to person of ordinary skill to divide the population distribution of a population of book-valued collective funds into quartiles because Sharpe, Cahart, Cochrane and others teach that such a distribution is due only to random error and holds no constructive informational content related to selecting investments from that population.

Devore teaches using an adequate sample size for statistical analysis, but does not teach using an adequate sample size for a process to select investments within a population of book-valued collective funds on the basis of anomalies in an assumed normal or otherwise symmetrical distribution around the average risk and return for that population. The process of claim 19 further defines the present invention.

More specifically, claim 19 defines the preferred criteria for the length of time considered for documenting a distribution of points of past-period performance for an asset-class population of investments be sufficient to provide a statistically legitimate measurement. As an explanatory point, this claim identifies an action to be taken to implement the selection process. It establishes a business practice, telling those wanting to practice the process how to accomplish the process of documenting differences in the density of populations of book-valued collective funds under the assumption of a normal distribution of points of performance within an asset-class of those funds. Since claim 19 is indirectly dependent on now allowable claim 13, applicant submits that claim 19 is now also allowable over the cited prior art.

As to claim 20, the office action states that it is rejected under the same rationale as claim 1 above.

Applicant's arguments as to claim 1 do not directly apply to claim 20. Claim 20 calls for creating the asset-class populations used in the process outlined in Claim 1 on the basis of unique commonalties in pattern and level of their past returns variance based on the industry-standard methods for doing this. As an explanatory point, this claim identifies an action to be taken to implement the selection process. It establishes a business practice, telling those wanting to use the process outlined in Claim 13 that they must limit their use to asset classes of investments that exist in uniquely distinct markets and exhibit uniquely similar patterns of investment risk. Since claim 20 is indirectly dependent on now allowable claim 13, applicant submits that claim 20 is now also allowable over the cited prior art.

As to claim 24, the office action states that Lear teaches population distribution is a display of investment returns as a function of investment risk. However, Lear does not teach investing in those funds that populate a single composite selected area as proposed in the

application. On the other hand, Schirripa (PN 6,282,520 B1) teaches investing in an area, see column 5, lines 30-35.

Schirripa teaches investing in assets lying within an area formed between two points of an efficiency frontier. On a plot of risk and return, the efficiency frontier is line drawn along the top edge of a distribution of points of investment performance for a population of asset allocation alternatives. This process of creating an efficiency frontier comes from Markowitz' Modern Portfolio Theory and pertains to the process of selecting for a portfolio allocation strategy by comparing the record of past periodic returns using the statistical tool of covariance. The efficiency line is created by the process of comparing the pair-wise covariance of allocation alternatives to find the ones with the lowest combinations of investment risk for each point of investment return existent within that portfolio.

Claim 24 is dependent from claim 22, which is in turn dependent from claim 13, a process pertaining to the selection of investments by finding anomalies in the expected distribution of an asset-class population of book-valued collective funds. This is a different investment management process than selecting for an asset allocation strategy.

In contrast, Schirripa's area does not reside within an asset class. It pertains to allocation strategy selection processes, not investment selection processes and uses Markowitz' algorithm for finding the strategy providing the minimum risk for each given return, rather than the identification of anomalies within a population distribution to create his area. It does not create its areas based on the assumption of equal populations of investment alternatives within the distribution of performance points on a risk/return plot. Therefore, this reference is not pertinent to the claimed invention herein.

Instead, claim 24 defines an action to be taken in implementing the selection process to invest in the funds selected. Claim 24 identifies an action to be taken to implement the

selection process. It further defines the method of the present invention. Since claim 24 is indirectly dependent on now allowable claim 13, applicant submits that claim 24 is now also allowable over the cited prior art.

As to claim 30, the office action states that Lear teaches population distribution is a display of investment returns as a function of investment risk. However, Lear does not teach creating an investment portfolio by holding funds in single composite selected area for at least thirty-six months as proposed in the application. On the other hand, Devore teaches obtaining an adequate sample size, which in this situation would be 36 months.

Claim 30 is dependent from claim 22, which is in turn dependent from claim 13, which outlines a novel process for selecting investments from within an asset-class population of book-valued collective funds based on anomalies in the distribution of the points of past investment performance for that population. Claim 30 further limits the method of the present invention. Claim 30 sets forth the process after the selection of investments is made. The term has no statistical significance for those selections. Devore's caveat about adequate sample size does not apply because the process outlined in Claim 30 has nothing to do with a creating a sample because it is not a statistical process, but a business process.

Since claim 30 is indirectly dependent on now allowable claim 13, applicant submits that claim 30 is now also allowable over the cited prior art.

As to claim 32, the office action states that Lear teaches population distribution is a display of investment returns as a function of investment risk. However, Lear does not teach (i) selling funds... and (ii) using the proceeds to further invest in a group of funds as proposed in the application. On the other hand, Friedman teaches the concept of "rollover" whereby an individual sells an investment and reinvests in another institution. See Freidman pages 601 (definition of rollover).

Claim 32 is dependent from claim 22, which is in turn dependent from claim 13. Claim 32 outlines a novel process for selecting investments from within an asset-class population of book-valued collective funds based on anomalies in the distribution of the points of past investment performance for that population. Claim 32 explains a further feature of the invention, namely, how to implement this novel process with the rollover of the investments after a specified holding period is a common investment practice. As an explanatory point, claim 32 identifies an action to be taken after the time of the recommended holding period of 36 months. Since claim 32 is indirectly dependent on now allowable claim 13, applicant submits that claim 32 is now also allowable over the cited prior art.

The rejection of claims 25, 31 and 33 is moot in view of the cancelation thereof.

V. Double Patenting Rejection

Claims 1-33 are provisionally rejected on ground of obvious-type double patenting. As per the examiner's request, applicant has filed herewith the required terminal disclaimers.

VI. Conclusion

The prior art fails to render obvious applicant's claimed invention. Accordingly, pending claims 1-8, 10, 13-22, 24, 30, 32 are patentable over the cited prior art and are believed to be in condition for allowance.

Corresponding action is respectfully solicited.

If an extension of time is required for timely submission of this response, Applicant hereby petitions for an appropriate extension of time and the Office is authorized to charge Deposit Account 02-0900 for the appropriate additional fees in connection with the filing of this response.

The Examiner is invited to telephone the undersigned should any questions arise.

Respectfully submitted,

/david r. josephs/

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